

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A method of sending an alert to selected client devices in a communications system including a server adapted to run a server application, a message router communicating with the server, a plurality of protocol gateways communicating with the message routers, and a network adapted to couple the server and the protocol gateways to client devices, comprising:

generating said alert with said server application, said alert including customer information;

sending said alert to said message router;

retrieving a station ID of said client device based on said customer information with said message router;

determining a communication type of said client device based on said station ID;

selecting one or more of said plurality of protocol gateways based on said communication type; and

forwarding said alert to said selected one or more of said plurality of protocol gateways;

formatting said alert with said protocol gateway for said selected client device; and

forwarding said formatted alert via said network to said selected client device.

2. (previously presented) The method of claim 1, wherein:
said customer information includes at least one of a customer ID and a port number.

3. (previously presented) The method of claim 2, wherein:
said step of determining a communication type further comprises
searching a user table to obtain said station ID associated with said customer ID.

4. (previously presented) The method of claim 2, wherein:
said step of determining a communication type further comprises
searching a local cache of said message router for said station ID associated
with said customer ID.

5. (previously presented) The method of claim 2, wherein:
said step of determining a communication type further comprises
searching a local cache of said message router and a device table for a first
device associated with said customer ID when both said customer ID and port
number are provided.

6. (previously presented) The method of claim 1, further
comprising:
returning an inactive customer message to said server if no station
ID is retrieved.

7. (previously presented) The method of claim 1, further
comprising:
segmenting said alert with said selected protocol gateway into
message segments before sending said alert over said network.

8. (previously presented) The method of claim 7, further
comprising:
assembling said message segments at said client device.

9. (previously presented) The method of claim 1, wherein:
said alert includes at least one of an alert message, a compression flag, an encryption flag, and an acknowledgement flag.

10. (previously presented) The method of claim 1, further comprising:

returning an acknowledgement to said selected protocol gateway after receiving said formatted alert message at said client device.

11. (previously presented) The method of claim 10, further comprising:

forwarding said acknowledgement from said selected protocol gateway to said server.

12. (previously presented) The method of claim 1, wherein:
said customer information is a client information object.

13. (previously presented) The method of claim 12, wherein:
said client information object includes a customer ID and a device ID.

14. (previously presented) The method of claim 13, wherein:
said alert includes an active device only flag and wherein said device ID can be set to all devices.

15. (previously presented) The method of claim 14, further comprising:

searching a local cache of said message router for said station ID if said active device only flag is set and said device ID is specified.

16. (previously presented) The method of claim 15, further comprising:

searching a user table for said station ID if said station ID is not located in said local cache.

17. (previously presented) The method of claim 14, further comprising:

searching only said user table for active client devices associated with said customer ID if said active device only flag is set and said device ID is set to all devices.

18. (previously presented) The method of claim 14, further comprising:

searching a local cache of said message router for said station ID if said active device only flag is not set and said device ID is specified.

19. (previously presented) The method of claim 18, further comprising:

searching a device table for said station ID if said station ID is not located in said local cache.

20. (previously presented) The method of claim 14, further comprising:

searching a device table for client devices associated with said customer ID if said active only flag is not set and said device ID is set to all devices.

21. (previously presented) The method of claim 1, further comprising:

providing each station ID retrieved in said step of retrieving a station ID to said server.

22. (previously presented) The method of claim 1, further comprising:

providing each station ID retrieved by said message router to said server, before forwarding said alert to said protocol gateway.

23. (previously presented) A method of sending alerts to client devices, comprising:

generating said alert at a server, said alert including a customer ID and a device ID;

forwarding said alert to a message router;

locating with said message router one or more station IDs based on said customer ID and device ID;

determining with said message router a communication type associated with each station ID;

forwarding said alert to a protocol gateway associated with said determined communication type; and

transmitting said alert with said protocol gateway over a network to said client devices.

24. (previously presented) The method of claim 23, further comprising:

receiving said alert with a transport layer of an application running on said protocol gateway and sending said alert from said transport layer to client applications.

25. (previously presented) The method of claim 24, further comprising:

segmenting said alert into message segments with said protocol gateway.

26. (previously presented) The method of claim 25, wherein:
said client application assembles said message segments.

27. (previously presented) The method of claim 23, further comprising:
sending an acknowledgement from said client device to said protocol gateway once said alert is received by said client device.

28. (previously presented) The method of claim 27, further comprising:
sending said acknowledgement from said protocol gateway to said server that forwarded said alert after receiving said acknowledgement from said client device.

29. (previously presented) The method of claim 23, wherein:
said alert comprises at least one of an alert message, a client information object including said customer ID and device ID, message flags, compression flag and an encryption flag.

30. (previously presented) The method of claim 29, wherein said messages flags specify at least one of:
whether said server requires an acknowledgement message;
whether said alert should be sent only if said client device is currently active; and
whether said protocol gateway should only attempt message delivery once.

31. (previously presented) The method of claim 23, wherein:
said alert includes an active device only flag and said device ID can be set to all devices.

32. (previously presented) The method of claim 31, wherein said locating step comprises:

- searching a local cache of said message router for said station ID if said active device only flag is set and said device ID is specified;

- searching only a user table for active client devices associated with said customer ID if said active device flag is set and said device ID is set to all devices;

- searching a local cache of said message router for said station ID if said active device only flag is not set and said device ID is specified; and

- searching a device table for client devices associated with said customer ID if said active device only flag is not set and said device ID is set to all devices.

33. (previously presented) The method of claim 32, further comprising:

- for said steps of searching a local cache of said message router, searching a database for said station ID if said station ID is not found in said local cache.

34. (previously presented) The method of claim 31, further comprising:

- providing each device ID located to server if device ID is set to all devices.

35. (previously presented) The method of claim 31, further comprising:

- sending an inactive message to said server if no device is located and said device ID is set to all devices, otherwise sending a customer not valid message.

36. (previously presented) The method of claim 23, further comprising:

formatting said alert for said client device with said protocol gateway.

37. (previously presented) A method of sending an alert to selected client devices in a communications system, comprising:

generating said alert with a server application, said alert including customer information;

retrieving a station ID of said client device based on said customer information;

determining a communication type of said client device based on said station ID;

selecting one or more of a plurality of protocol gateways based on a communication type; and

forwarding said alert to said selected one or more of said plurality of protocol gateways; and

formatting said alert with said protocol gateway for said selected client device.

38. (previously presented) The method of claim 37, wherein:

said customer information includes at least one of a customer ID and a port number.

39. (previously presented) The method of claim 38, wherein:

said step of determining a communication type further comprises searching a user table to obtain said station ID associated with said customer ID.

40. (previously presented) The method of claim 38, wherein:
said step of determining a communication type further comprises
searching a local cache of a message router for said station ID associated with
said customer ID.

41. (previously presented) The method of claim 36, wherein:
said step of determining a communication type further comprises
searching a local cache of a message router and a device table for a first device
associated with said customer ID when both said customer ID and port number
are provided.

42. (previously presented) The method of claim 37, further
comprising:
returning an inactive customer message to said server if no station
ID is retrieved.

43. (previously presented) The method of claim 37, further
comprising:
segmenting said alert with said selected protocol gateway into
message segments before sending said alert over said communications system.

44. (previously presented) The method of claim 43, further
comprising:
assembling said message segments at said client device.

45. (previously presented) The method of claim 37, wherein:
said alert includes at least one of an alert message, a compression
flag, an encryption flag, and an acknowledgement flag.

46. (previously presented) The method of claim 37, further comprising:

returning an acknowledgement to said selected protocol gateway after receiving said formatted alert message at said client device.

47. (previously presented) The method of claim 46, further comprising:

forwarding said acknowledgement from said selected protocol gateway to said server.

48. (previously presented) The method of claim 37, wherein:
said customer information is a client information object.

49. (previously presented) A system for sending an alert to selected client devices in a communications system, comprising:

means for generating said alert with a server application, said alert including customer information;

means for retrieving a station ID of said client device based on said customer information;

means for determining a communication type of said client device based on said station ID;

means for selecting one or more of a plurality of protocol gateways based on a communication type; and

means for forwarding said alert to said selected one or more of said plurality of protocol gateways; and

means for formatting said alert with said protocol gateway for said selected client device.

50. (previously presented) The system for sending an alert to selected client devices in a communications system according to claim 49, wherein:

said customer information includes at least one of a customer ID and a port number.

51. (previously presented) The system for sending an alert to selected client devices in a communications system according to claim 50, wherein:

said means for determining a communication type comprises a means for searching a user table to obtain said station ID associated with said customer ID.

52. (previously presented) A system for sending alerts to client devices, comprising:

means for generating said alert at a server, said alert including a customer ID and a device ID;

means for forwarding said alert to a message router;

means for locating with said message router one or more station IDs based on said customer ID and device ID;

means for determining with said message router a communication type associated with each station ID;

means for forwarding said alert to a protocol gateway associated with said determined communication type; and

means for transmitting said alert with said protocol gateway over a network to said client devices.

53. (previously presented) The system for sending alerts to client devices according to claim 52, further comprising:

means for receiving said alert with a transport layer of an application running on said protocol gateway and sending said alert from said transport layer to client applications.

54. (previously presented) The system for sending alerts to client devices according to claim 53, further comprising:

means for segmenting said alert into message segments with said protocol gateway.

55. (previously presented) The method of claim 54, wherein:
said client application assembles said message segments.